

# COMMUTER RAIL IN TEXAS

Yes, it really exists.

## TRINITY RAILWAY EXPRESS

Atlanta Commuter Rail Symposium 9/7/07

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# Trinity Railway Express



Fort Worth  
Transportation  
Authority



Dallas Area  
Rapid  
Transit

Atlanta Commuter Rail Symposium

# Trinity Railway Express (TRE)

- TRE-Joint Project of Dallas Area Rapid Transit (DART) & Ft. Worth Transportation Authority (FWTA)
- DART passed by vote in August, 1983
- 1% sales tax collected since Jan. 1984
- FWTA passed by vote in November, 1983
- 1/2 % sales tax



# Significant Dates in TRE History

***December 30, 1996*** – DART opened the first commuter rail line in the southwestern United States. The first segment of the Trinity Railway Express follows along a 10-mile commuter rail line linking downtown's Union Station, the Medical/Market Center Station, and the South Irving Transit Center. More than 4,000 people rode the train during its first day of operation.

***December 15, 1997*** – The Trinity Railway Express commuter rail line debuts an expanded schedule featuring midday and evening service. The new schedule allows DART to offer 50 trips each weekday on the Trinity Railway Express, up from the 30 currently provided.

***December 5, 1998*** – The Trinity Railway Express commuter rail line adds Saturday service to its schedule.

***March 12, 1999*** – The Trinity Railway Express carries its one-millionth customer.

***September 16, 2000*** – Trinity Railway Express service extends west to four new stations at West Irving, CentrePort, Hurst/Bell and Richland Hills. Revenue service begins September 18. More than 5700 people ride the first day.

***December 3, 2001*** – Service extends to the Intermodal Transit Center and T & P Stations in downtown Fort Worth. This completes the rail connection between Dallas and Fort Worth.

***January 14, 2002*** – Trinity Railway Express Dedicates Intermodal Transportation Center accommodating TRE, the T, Amtrak Passenger Service, and retail opportunities.

# REAL HISTORY

(not for attribution or publication)

- Area wanted a rail system to compete with other cities (Atlanta) and be “World Class”
- New Legislation passed to allow Transit Authority in North Texas in early 1980s
- Lone Star Transit Authority-Dallas & Tarrant County overwhelmingly defeated in all areas
- DART vote in August, 1983
- FWTA vote in November, 1983

# DART

- More detailed Service Plan created with 180+ miles of "Pre Metro" passenger rail
- Passed-1% sales tax-collected 1/1/84
- Bond vote overwhelmingly failed in 1988
- Scaled back Service Plan with less than ½ amount of rail, including Commuter rail to Irving



# FWTA

- More Simple Service Plan with bus only service
- Passed with ½% sales tax
- Commuter Rail connecting Ft. Worth to Dallas much later



## Trinity Railway Express TRE

### Legend

- Trinity Railway Express (TRE) & Station
- Fare Zone Boundary
- Park & Ride



# DART Commuter Rail

- Planned to South of DFW airport & Irving (1989 plan)
- Along former Rock Island Rail line acquired by Cities of Dallas and Ft. Worth in 1984
- DART renegotiated freight agreements on rail line
- Renegotiated agreement rejected by Ft. Worth

# 1988-1994

## "The Dark Years"

- Revised Service Plan called for Commuter Rail to Irving
- Existing Freight Agreement didn't allow much commuter rail
- After rejection of DART negotiated revised freight agreements, negotiations with: Dallas & Ft. Worth (RAILTRAN) and their outside consultants/attorney

# Agreements between

- The Cities & The Transit Authorities
- DART & FWTA (to create TRE)
- TRE & UP
- TRE & BNSF



# TRE Interlocal Agreement

- Created TRE
- Name only (dba), no corporate status
- Joint TRE Advisory Committee
- Joint TRE Management Committee
- Very small TRE staff
- Split for subsidy
- Joint fares with TRE, DART, FWTA
- Seamless for customers, but lots of sausage made behind scenes

# TRE Operations

- Contracted Operations, Maintenance, & Dispatch with Herzog Transit Services, Inc.
- Phase I (Dallas County-DART) Budget: \$70m
- Phase II (Tarrant County-FWTA) Budget: \$170m
- Subsequent Projects: Additional Equipment, West Irving Station, Added Parking, New & Rebuilt Elm Fork Trinity Bridge, Sidings, & Quiet Zones. Budget \$50+m.

## Trinity Railway Express Ridership by Fiscal Year

**1996** 10-mile system opens December 30, 1996

**1997** 175,969

**1998** 455,515

**1999** 587,519

**2000** 688,486 (service extended to Tarrant County, September 2000)

**2001** 1.32 million (service extended to Fort Worth, completing TRE system, December 2001)

**2002** 2.13 million

**2003** 2.29 million

**2004** 2.16 million



Phase I Opened  
December, 1996

Three Stations:  
South Irving-Dallas  
Union Station



# Trinity Railway Express Rail Diesel Cars (RDC)

DART purchased 13 RDCs from VIA Rail Canada in 1993. The Budd Company in Philadelphia, Pennsylvania originally built the RDCs in the 1950's. They were used by VIA Rail throughout Canada in intercity service.

The RDCs were completely stripped down to their stainless steel shell and remanufactured by GEC Alsthom Transport, Inc. at their Montreal facility. All new interiors were provided, including new seats, floors, ceilings, walls, windows, and lighting.

The makeover took 20 months. Upon completion, the RDCs were shipped as part of a freight train to Dallas.

Once the RDCs arrived in Dallas, each car had its interior installation completed including major components mounted, wired and plumbed, and then were tested for 3-5 days prior to being put into service.

Each RDC has 92 passenger seats plus 4 mobility impaired areas. Wheelchair access is through a manually deployed bridgeplate from the side doors to a "high block" on the station platform. Each car is 85 feet long, 10 feet wide, and 14 feet high. Empty, each car weights 135,000 pounds. Its design speed is 85 mph, but travels at a maximum speed of 60 mph while in service. Each car has 2 doors on each side.

The RDCs are powered by 2 diesel engines, each generating 300 horsepower. Each car has dual cabs to allow bi-directional operation just like DART's light rail vehicles (LRV).



# *Rail Diesel Car Technical Specifications*

Vehicle Type: Dual-cab, diesel propulsion rail vehicle

Vehicle Height: 14 feet, 8 inches

Vehicle Width: 10 feet

Vehicle Length: 85 feet

Vehicle Weight: 135,000 pounds each

Passenger Capacity: 96 seated

Travel Speed: Top operating speed: 79 mph. Average speed: 45 mph

Body: Stainless steel

Interior: Redesigned and refurbished to accommodate longer distance commuting.

Deluxe high-back seating with armrests; luggage racks; non-skid rubber flooring

Cooling/Heating: Heating, ventilation, and air-conditioning system

Special Features: Accessible/accommodations for four wheelchairs per vehicle

Vehicle Cost: \$1.8 million each (cost includes engineering, shipment, etc.)



# Final Expansion to Downtown Ft. Worth-December, 2001





# Trinity Railway Express Locomotives, Bi-Level Coaches, Cab Cars

## *Fleet configuration*

6 locomotives

10 bi-level coaches

7 cab cars

## *TRE F-59 PH Locomotive Technical Specifications*

Originally Go Transit units purchased by TRE. Amtrak installed Cab HVAC, repainted car bodies, and converted HEP to 480V U.S. style.

First used in service at TRE late 2000.

Road numbers: 565 thru 568

Locomotive manufacturer: EMD

Locomotive type: (B-B) 0440

Locomotive horsepower: 3100

Years built: 1994

Vehicle height: 15' 8"

Vehicle width: 10' 6"

Vehicle length: 58' 2"

Vehicle weight: 260,000 lbs.

Maximum speed: 83 mph

# Trinity Railway Express Push-Pull Equipment

## ***TRE F-59 PHI Locomotive Technical Specifications***

Purchased new from EMD, some electrical, and pre-delivery work done by Alstom. First used by TRE in 2001.

Road numbers: 569 & 570

Locomotive manufacturer: EMD

Locomotive type: (B-B) 0440

Locomotive horsepower: 3000

Years built: 2001

Vehicle height: 15' 11.5"

Vehicle width: 10' 6.5"

Vehicle length: 58' 2"

Vehicle weight: 268,000 lbs.

Maximum speed: 83 mph

## ***TRE Bi-Level Cab & Coach Equipment***

Road numbers: 1000 and 1001 Cab Cars, 1050 thru 1059 Coaches

Car manufacturer: Hawker-Siddeley

Originally built: 1976 thru 1977, rebuilt by Amtrak 2000 thru 2001

Originally owned and operated by: GO Transit, Canada



## *TRE Bi-Level Cab & Coach Equipment*

Road numbers: 1000 and 1001 Cab Cars, 1050 thru 1059 Coaches

Car manufacturer: Hawker-Siddeley

Originally built: 1976 thru 1977, rebuilt by Amtrak 2000 thru 2001

Originally owned and operated by: GO Transit, Canada

Road numbers: 1002 and 1003 Cab Cars

Car manufacturer: Bombardier

Years built: 2000

Purchased new by: TRE

Road numbers: 1004, 1005 and 1006 Cab Cars

Car manufacturer: Bombardier

Years built: 2003

Purchased new by: TRE

Seating capacity for cab and coach cars: 123 to 152 depending on configuration of car

Maximum customer capacity: 399 to 428 depending on exact configuration of car

Height: 15' 11"

Width: 9' 10"

Length: 85'

Maximum design speed: 95 mph

Empty weight: 122,000 lbs.

Climate control: Full heating, air conditioning and ventilation

Customer amenities: workstation tables, bicycle racks, luggage racks, cup holders

Accessibility: Wheelchair access and interior spaces

Cars equipped with restrooms: 1000, 1001, 1002, 1003, 1004, 1005, 1006, and 1053

